

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A group III-nitride-based compound semiconductor device, comprising:

a first p-layer and a second p-layer, the first p-layer and the second p-layer comprising an acceptor impurity; and

an intermediate layer provided between the first p-layer and the second p-layer, the intermediate layer contacting a surface of the first p-layer and a surface of the second p-layer, the intermediate layer comprising a donor impurity,

wherein the intermediate layer contacts an entirety of the surface of the second p-layer and ~~comprises a conductivity such that it prevents an applied voltage from concentrating on a part of a p-electrode side~~ an entirety of the surface of the first p-layer,

wherein the first p-layer is formed on the light emitting layer, the intermediate layer is formed above the first p-layer, and the second p-layer is formed above the intermediate layer,
and

wherein a band gap decreases from a position proximate to the light emitting layer to a position proximate the second p-layer.

2. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 1, wherein:

the intermediate layer comprises a concentration distribution of donor impurity corresponding to a concentration distribution of the acceptor impurity in the intermediate

layer.

3. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 1, wherein:

the acceptor impurity comprises magnesium and the donor impurity comprises silicon.
4. (Original) The group III-nitride-based compound semiconductor device according to claim 3, wherein:

the donor impurity of silicon has a concentration distribution substantially 1/10 that of the acceptor impurity of magnesium.
5. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 1, wherein:

the intermediate layer comprises a hole concentration equal to or less than $10^{17}/\text{cm}^3$.
6. (Original) The group III-nitride-based compound semiconductor device according to claim 1, wherein:

the first p-layer includes a p-cladding layer made of p-type AlGa_N doped with Mg, and the second p-layer includes a p-contact layer made of p-type GaN doped with Mg.
7. (Currently Amended) A group III-nitride-based compound semiconductor device, comprising:

a sapphire substrate;

an n-contact layer formed on the sapphire substrate;
an n-cladding layer formed on the n-contact layer;
a light emitting layer formed on the n-cladding layer;
a p-cladding layer and a p-contact layer, to each of which an acceptor impurity is added;

an intermediate layer provided between the p-cladding layer and the p-contact layer, the intermediate layer contacting a surface of the p-cladding layer and a surface of the p-contact layer;

a thin film p-electrode disposed on the p-contact layer;

a thick film p-electrode disposed on the thin film p-electrode; and

an n-electrode disposed on the n-contact layer,

wherein the intermediate layer contacts an entirety of the surface of the p-contact layer and an entirety of the surface of the p-cladding layer,

wherein the p-cladding layer is formed on the light emitting layer, the intermediate layer is formed above the p-cladding layer, and the p-contact layer is formed above the intermediate layer, and

wherein a band gap decreases from a position proximate to the light emitting layer to a position proximate the p-contact layer ~~p-layer and comprises a conductivity such that it prevents an applied voltage from concentrating on a part of a p-electrode side.~~

8. (Original) The group III-nitride-based compound semiconductor device according to claim 7, wherein:

the light emitting layer includes a multiquantum well structure formed on the n-

cladding layer by laminating multiple pairs of well layers of undoped InGaN and barrier layers of undoped GaN.

9. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 7, wherein:

the thin film p-electrode comprises a first layer of cobalt and a second layer of gold;

the thick film p-electrode is formed by laminating a first layer of vanadium, a second layer of gold, and a third layer of aluminum in sequence, on the thin film p-electrode; and

the n-electrode is formed by laminating a first layer of vanadium and a second layer of aluminum on a partly exposed portion of the n-contact layer.

10. (Original) The group III-nitride-based compound semiconductor device according to claim 7, further comprising:

a reflective metal layer of aluminum formed on the lower surface of the sapphire substrate.

11. (Currently Amended) A group III-nitride-based compound semiconductor device, comprising:

a first p-layer and a second p-layer, the first p-layer and the second p-layer comprising an acceptor impurity; and

a low-conductivity layer provided between the first p-layer and the second p-layer, the low-conductivity layer contacting a surface of the first p-layer and a surface of the second p-layer, the low-conductivity layer comprising a donor impurity in a first concentration and the

acceptor impurity in a second concentration,

wherein the low-conductivity layer contacts an entirety of the surface of the second p-layer and an entirety of the surface of the first p-layer.

wherein the first p-layer is formed on the light emitting layer, the low-conductivity layer is formed above the first p-layer, and the second p-layer is formed above the intermediate layer, and

wherein a band gap decreases from a position proximate to the light emitting layer to a position proximate the second p-layer

~~comprises a conductivity such that it prevents an applied voltage from concentrating on a part of a p-electrode side.~~

12. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 11, wherein:

the low-conductivity layer has a thickness of about 100 nm or less.

13. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 11, wherein:

the concentration of the donor impurity in the low-conductivity layer in a thickness direction is substantially 1/10 of the concentration of acceptor impurity.

14. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 11, wherein:

an activation rate of an amount of the donor impurity is substantially equal to the

activation rate of an amount of the acceptor impurity.

15. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 1, wherein said first p-layer comprises $\text{Al}_{0.15}\text{Ga}_{0.85}\text{N}$.

16. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 1, wherein said intermediate layer has a donor impurity concentration distribution of $2 \times 10^{18}/\text{cm}^3$ to $3 \times 10^{17}/\text{cm}^3$.

17. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 1, wherein:

said intermediate layer allows current flow at an entire region thereof.

18. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 7, wherein:

said intermediate layer allows current flow at an entire region thereof.

19. (Previously Presented) The group III-nitride-based compound semiconductor device according to claim 11, wherein:

said low-conductivity layer allows current flow at an entire region thereof.